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ATROPINE; ITS PHYSIOLOGICAL ACTION, AND ITS USE IN TETANUS.

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HAVING had an opportunity of trying two well-known and violent poisons in some cases of tetanus, I thought it might be interesting to publish some account of the effects of these remedies, and must ask for a brief space in your Journal.

Two forms of tetanus are recognized, the idiopathic and traumatic; names which indicate their supposed origin, but which reveal our ignorance of the pathological conditions under which they may occur. Tetanus may follow a slight injury, or some more serious wound. Dr. Dewees, in the *Medical Gazette*, considers[*] "that in idiopathic tetanus a very frequent first step is sudden arrest of violent perspiration; and that certain reflective acts may be thrown upon some disordered or impressible cerebro-spinal centre, causing convulsive muscular manifestations;" and goes on to show "how these repressed excreta act specifically, abrogating or over-exciting the nervous functions, thus producing all sorts of incurrent disorders." If this be so, the same effects which cause the disease, unless modified by some remedial or restraining action, tend to increase its manifestations. In accordance with these principles veterinary surgeons try by tremendous doses of aloes and other purgatives to relieve the system of excreta, and allow the animal to recover. Sometimes this treatment meets with success, especially in the form called idiopathic, but, generally, the prognosis is made (and correctly) that the animal will die.

The animals generally die from asphyxia or exhaustion, and in frightful convulsions. It would seem from what is known of the pathological condition produced by tetanus, that the sympathetic nervous system is in an abnormal state, that of continued excitability, in which there is spasmodic contraction of the capillaries as well as of the voluntary and involuntary muscular system.

The pathological investigations made after death from tetanus, throw but little light upon our knowledge of the disease. The results are very often contradictory or doubtful, and have often been explained by a reference to the position of the body examined, in which extravasated blood was shown to gravitate towards certain points.

Chloroform has a restraining influence upon the tetanic spasms, but they recur as soon as the inhalation ceases. Before speaking of Belladonna as a remedy, I should like to notice some of its physiological effects.

Atropine seems to be poisonous to all animals, provided it is received and retained in a sufficient quantity in the blood. Herbivorous animals appear to eliminate the poison very rapidly, and both belladonna and atropine, in doses sufficient to kill several men, have been borne by goats, rabbits, guinea pigs and sparrows, with no inconvenient symptoms beyond dilatation of the pupil and diarrhœa. In carnivorous animals, however, its poisonous effects are very manifest, even in minute doses. Two milligrammes ($\frac{1}{32}$ of a grain) produce cerebral trouble and serious accidents in man. If, however, fatal poisoning by this drug occurs, it follows very soon after its administration, as the drug is very rapidly eliminated.

Slight doses accelerate the capillary circulation ,reducing the calibre of the arterioles, to 1-3 or 1-2 (by micrometer) their normal size. This retraction of the blood-vessels is not uniform, but the walls of the arterioles become unevenly contracted in undulations.[*] The diminution of calibre coincides with the acceleration of the circulation. Hayden[†] has concluded that this constriction is due to reflex action. For in cutting the integument of a frog's leg this same phenomenon occurs. The sciatic nerve contains some filaments of the sympathetic system also, so that we must not be surprised to find that the constriction produced by this operation is not as marked as that caused by the atropine. Hayden also notices the coincidence of accelerated circulation *with* the constriction. These effects on the circulation continue but a short time, and the arteries soon return to their primitive condition. The veins do not diminish in volume.

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[*] Dec., 1862.

[*] Wharton Jones, Med. Times and Gazette, 1857, p. 27.

[†] Dublin Quarterly Jour. of Med. Science, Aug. 1862.

If, however, the dose be larger, the circulation slackens, and then completely stops. All the vessels are gorged with stagnant blood, a perfect hyperæmia results. This stasis commences in the venules and then ensues in the capillaries and arterioles. The blood stops in the artery only after the stasis occurs in the capillaries. These same effects occur, also, when the drug is applied to a portion of the circulation under microscopical observation.

The effect of the smaller dose is exciting, and its local application seems painful to the frog. In the denuded skin of man the pain is compared to that produced by a hot iron.

In larger doses it seems to paralyze the vaso-motor system; the flesh has a blood-red appearance, and with the microscope is seen to be in a state of hyperæmia. These peculiarities have been also observed in the mesentery of the rat, and in the ear of rabbits. Meuriot * would then consider atropine as a vasculo-cardiac agent, and to his memoir, mainly, I am indebted for much of my knowledge of its action.

With regard to its qualities as an anæsthetic, Meuriot affirms that superficial neuralgia derives much benefit from atropine if applied topically. In small doses, however, exhibited by the stomach, I know of three cases of nervous headache which have been often and decidedly relieved by belladonna. In fact, homœopathists prescribe their sugar-plums of belladonna for all headaches of this kind, and their success is notorious.

The inconvenience of hypodermic applications of atropine is the severe pain caused by its contact; which, as I have already said, has been compared to that caused by a hot iron. This may persist for two or three days, and is supposed to be owing to the trouble in the capillary circulation of the skin. We see the same conditions in severe chilblains. This drug never destroys sensibility, but may induce analgesia.

Nerves in contact with atropine preserve their excitability, and the contact of the electrodes causes contractions, reflex movements, and cries.

In frogs peripheric sensibility is diminished, but this is not the case with other animals experimented upon.

Its action upon the spinal cord as compared with strychnine and bromide of potassium is peculiar.

Strychnine produces an exaltation or exaggeration of the excito-motory functions dependent upon this central organ. The bromide diminishes the activity of these functions, whilst atropine has an intermediate action, but with a tendency to their increase rather than their diminution. The effects are in proportion to the dose administered, large doses tending to a stasis, the smaller to a diminution of blood in the spinal meninges and nerve-substance.

It would seem strange (if the foregoing summary of the physiological action of belladonna be correct) that this drug should be recommended in tetanus. If in this disease there is congestion of the nervous centres or peripheries, we shall be increasing rather than diminishing the determination of blood to the capillaries and to the spinal cord, unless we should use much care in apportioning the dose; as we have seen that it is *only* in small quantity that atropine tends to diminish the amount of blood in the spinal meninges and nerve-substance. But it would be a very difficult matter to determine an amount which in every person should produce the same effect. It would be only by carefully watching that we could produce a modification of the tetanic spasms and keep the action of the drug within the limit. Thus, much caution would be required in the application of the drug to those cases in which we wished to produce oligæmia or hyperæmia in the tissues of the body.

Oligæmia of the brain resulting from a deficiency of blood-globules acts in the same way as a section of the spinal cord, or an exaggeration of the excito-motor power, and therefore we must beware, lest in avoiding Scylla we fall into Charybdis.

It may be said, that the physiological action of drugs upon man and animals is not subject to the same laws, and, frequently, does not produce the same effects. This cannot be exactly true with this drug, as its action, so far as at present known, is the same upon man and animals; provided that the drug has entered the venous circulation in a form sufficiently concentrated. Some animals can so rapidly eliminate it, that only a quantity insufficient to produce toxical effects, is present in the capillary circulation at one time, and hence their apparent immunity to its baneful action.* That the urine of a goat fed with belladonna leaves was injected into the stomach of a dog with fatal results, and that his urine caused dilatation of the pupil in another dog, is a very curious fact; and shows that a dose which a dog cannot quickly enough eliminate may remain in a goat's bladder, unabsorbed into the capillary circulation. If the urethra of the goat had been tied up, *imbibition* of the poison and prevention of its elimination would probably have produced a different result.

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* Paris, 1868.

† The action upon the pupil results from a destruction of the excitability of the fifth pair of nerves. Electrization, and the action of certain excitors of muscular contractility (myotiques) upon atropinized eyes seem to show that the sphincter of the iris will preserve its power of contracting. But the feeble action that is observed from the exhibition of atropine after the section of the great sympathetic, and the different results obtained from electrization of eyes under the influence of atropine, depending on the destruction or integrity of the sympathetic nerve, *seem* to indicate that this drug has an exciting action upon the terminations of the sympathetic. The demonstration is also given in the effects of atropine on eyes of which the motor occularis communis is completely paralyzed, and experimentally on animals when the sphincter iris is destroyed. Belladonna is not a hypnotic but possibly a stupefying narcotic. In small doses it induces agitation and insomnia, in large doses stupor, in intermediate doses dreams and general tremblings.

The effect upon the temperature has been found by numerous observers to be an increase of from 1-2 to 3-10 of a degree centigrade.

Atropine causes dryness of the skin and of the mucous surfaces, probably from a reabsorption of the liquids on account of the increased rapidity of the circulating current. Thirst from atropinization may be thus accounted for. The local action of the drug upon the mouth produces salivation. As the peripheric sensibility is also diminished, the secretions are decreased. In this state acetic acid placed upon the tongue does not salivate.

Small doses augment the pressure of the blood in the kidneys, large doses diminish the pressure, and thus, according to Bernard,* in the former case we obtain diuresis, and in the latter suppression of urine.

M. Behier † recommends for tetanus subcutaneous injections of the valerianate of atropia along the nape of the neck, and gives the following formula:

℞. Atropiæ valerianatis, .30 = grs. v.
Aquæ, 30.00 = ℥i.

Of this 5 drops to be injected every two hours. Pescheux (Verneuil) reports a case of tetanus relieved by subcutaneous injections of atropine sol. 1-100. Three-fourths of the syringe of Pravaz (3 grammes) were injected, in doses of 10 drops at a time. Symptoms of atropic poisoning (slight) occurred, and the tetanus disappeared.

ATROPINE AS A REMEDY FOR TETANUS.

On the 2d of April, 1868, I received a request from Dr. Stickney to visit a horse suffering from an attack of lockjaw, in a stable in my vicinity. On inquiry I found that the animal had been ailing for a few days, and that sulphur in large quantity had been given by the hostler in charge. He had not eaten anything since Friday, and had had but little discharge from the bowels or bladder. The facial muscles and those of the neck were very rigid, though elsewhere they were but slightly if at all affected. The animal could not open his mouth, nor could it be forced open. Dr. S. had ordered him small doses of prussic acid by the rectum every two hours.

Three days afterward I was told that Dr. Stickney had given me the liberty of resorting to any expedient that might be suggested, and I went again to see the horse. He was respiring rapidly and was in much distress, and the spasmodic contractions were more extended and severe. The eyes were half closed.

It is unnecessary to give more details. The peculiarities of tetanus are well known and easily understood from the descriptions recorded in standard works. The disease had increased very rapidly during the twenty-four hours, and now there was no muscle which was not tense in a greater or less degree. Several methods occurred to my mind to try as alleviations of the spasms, as a cure was now out of the question. I had in a previous case tried hydrocyanic acid unsuccessfully. Strychnine and electricity I thought of, especially the latter. However, upon reflection I considered it advisable to ask Prof. Brown-Séquard, what drug it would be advantageous to experiment with. Several drugs were discussed, but the one he preferred was atropine, and, at his advice, I publish the record of the experiment. I procured one-sixth of a grain of the sulphate of atropia, which I dissolved in two drachms of water.

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* [illegible] Medical Journal, 1868, p. 278.

† Meuriot, sur la Belladonne, Paris, 1868, p. 137.

* Leçons sur les Liquides de l'Organisme, 1859, tome II. p. 155.

† Dict. de Med. et Chir. Paris, Baillière et fils, 1866, tome IV. p. 86.

At 7 P.M., on the same day, I injected subcutaneously, according to the advice of this eminent physiologist, this solution in three different doses (with ten minutes interval between each) under the fore-shoulder. The animal was under the influence of chloroform for ten minutes before the first injection was made, in order to prevent any serious agitation.

In half an hour after the last injection he discharged a moderate quantity of urine; and, as he appeared much easier, I left him for an hour. On my return I found him still more comfortable, and again three hours after the hostler told me that he had been lying down and had got up again; the muscular spasm was a little reduced, especially in the hinder part of the body.

On the next morning, the man showed me about a hatfull of soft fæces that the horse had passed during the night, and said that the bedding was well soaked with his urine. I then obtained one grain more of the sulphate of atropia, which I dissolved in eight pints of water. I directed that one pint of this solution should be injected into the rectum every hour, and that between the first and second doses they should inject some milk and water. The first injection was made at 7 P.M. At 3 o'clock the man came down and said that they had succeeded in opening the horse's mouth, that he was in a great sweat, and that he had been trying to eat his bedding; he wished to know what he might give him to eat. I directed first that the medicine should be omitted; second, that they should boil some carrots and squeeze their juice into a pail of water, put in this a handfull of bran and a wine-glassful of alcohol; that while this was preparing they should give him some water if he could drink it. In an hour afterwards I found him bathed in a profuse sweat, the muscles surprisingly relaxed, and the animal drinking water of his own accord from a pail. His mouth was partially open, and the eyelids so drawn up that with difficulty could I see the iris. He had drunk some of the liquid food, prepared as directed, but did not like it, probably on account of the alcohol. So I was ordering some other mixture when Dr. Stickney appeared. He was much surprised on seeing the change in the horse, and we were both sanguine (too much so as it afterwards proved) of the animal's recovery. He said that he had never seen so sudden a change in tetanus in a horse. I asked him to prescribe the diet, and soon we left. On my return, three hours after, the animal had passed a large amount of fæces, and much urine. His mouth was still open, and the muscles much relaxed, but *not* so much as on my previous examination. I therefore ordered another pint of the diluted medicine to be placed in his pail of water. He had just drunk a quantity of oatmeal gruel, and had lain down and got up again several times. Still, as the spasms were apparently stronger, I considered it important to give another dose of atropine. Two pints had been injected, making a quarter of a grain of atropine introduced into the rectum. At 9 o'clock the next morning (Wednesday, 7th) I found on inquiry that the horse was dead. On an investigation I found that at 5 o'clock a noise of kicking was heard in his stall, and the man on going down found the animal throwing his head round while lying on his side, kicking violently with all four feet, and bathed in sweat. Evidently, from his description, the horse was in a convulsion, which lasted twenty minutes or so, after which the animal expired. He said that the muscles were not very stiff, not so much so as before the atropine had been given.

A natural question is suggested, whether this was a case of traumatic tetanus? There was no proof that it was. The horse had been lying idle all winter in a cellar stable, and had been shod four weeks before his attack. He had been exposed in a paddock to our last severe snow storm, and shortly after began to ail.

ATROPIÆ VALERIANAS.

June 27th, 1868.—Tetanus. Colt 1 year old. This disease manifested itself June 26th, P.M., two weeks ago, after castration.

This morning the long muscles of the neck are distinctly marked by tension of their fibres. The membrana nictitans closes and opens itself when a hand is placed near his head. As in the last case there is hyperæsthesia of the skin. The hind legs appear stiff, though the individual muscles are not particularly tense. The wound in the scrotum appears well. There is no swelling of the sheath or neighboring parts. There is a slight running of serum from the scrotum down the legs (this I understand is perfectly normal, and another *healthy* colt, castrated at the same time, shows the same phenomenon. Respiration appears easy, and the animal can chew grass slowly, and drink water, though the latter is swallowed more noisily and with more difficulty than is usual with horses. Fæces have passed recently and appear moist. The man in charge *says* that he has passed urine, but of this I have my doubts. The man is not to be relied on, as he is apt to speak as he thinks he is desired.

I administered subcutaneously a solution of atropiæ valerian., containing a little less than 1-24 gr. The puncture apparently gave a good deal of pain, though he did not seem to mind the injection of the fluid. He afterwards ate and drank as before the injection. The pupil was not dilated half an hour after the injection, nor was there any amelioration. I left directions for 1-50 gr. to be taken two hours after, and 1-24 gr. two hours after that, and another dose at 9 or 10 P.M.

The directions were carried out and a large amount of the drug was administered per rectum.

The physiological action upon the *iris* was very marked, but the disease had gained ground and the animal died three days after I first saw him. The colt had taken 2½ grs. of the drug in all. In this last case no effect upon the tetanic symptoms was observed. The disease increased, in spite of the drug, and this even while the system was showing the physiological action of this drug.

Perhaps it may be of interest to the readers of this article to give the conclusions regarding the action of Belladonna arrived at by M. Meuriot in the *brochure* before alluded to:

I. "Atropine is the active principle of belladonna, and assumes all the properties of this solanum.*

II. "The intensity of its action varies with the species of animals. Herbivora are less sensible to its action than the Carnivora. In man its poisonous action is the most violent; but no animal is exempt.

III. "Its action also varies with the dose employed; for small doses accelerate the heart's pulsation and augment the vascular tension; poisonous doses diminish the tension and modify the cardiac pulsations.

IV. "Belladonna is a vasculo-cardiac poison, in the classification of M. Sée. Its action produces especially the innervation of the heart and of the vessels.

V. "The varied phenomena produced by Atropine depend mostly upon its primordial and elective action, or are due to the elimination of the poison.

VI. "Atropine acts upon the heart through the pneumogastric nerve, whose peripheral extremities are paralyzed. It augments the frequency of the cardiac pulsations.

VII. "In a small dose it augments the tonicity of the vascular muscles; in a poisonous dose it diminishes, and even destroys this; whence the application of Belladonna to epilepsy, in which the access seems to be due to modifications of cerebral circulation.

VIII. "The variations of the arterial tension are subordinate to the state of excitation or paralysis of the muscular coat of the vessels.

IX. "In small doses atropine accelerates the respiration; in poisonous doses it diminishes its frequency.

"The acceleration of these movements depends upon the excitation of the respiratory centres; the consecutive retardation, upon a paralysis of the extremities of the vagi nerves; whence its application in the treatment of asthma.

X. "Atropine in a therapeutical dose, increases the activity of the excito-motory functions of the spinal cord.

"In a poisonous dose it exaggerates the reflex power till it may produce convulsions.

XI. "Atropine *always* produces agitation, insomnia, delirium, and in a poisonous dose, coma; it is not at all a narcotic.

XII. "Atropine is eliminated by the kidneys, by all the mucous surfaces, and sometimes by the skin of man. Its elimination is always rapid; so that its action is of short duration.

XIII. "The effects due to elimination are numerous, viz.: redness of the mucous surfaces and of the skin, frequent desire of micturition; colic; anal and vesical tenesmus; profuse sweat, diarrhœa, &c.

XIV. "The redness and dryness of the mucous membrane explains aphonia, dysphagia, dysuria, &c.

XV. "Not only are all the secretions of the mucous membrane diminished, but there may be also, on account of the activity of the circulation, a rapid reabsorption of all the liquids which have exuded from mucous surfaces or from wounds; whence its advantage in exaggerated secretions, and its effect upon coughs, &c.

XVI. "Atropine, applied locally to the tissues, produces an activity of the capillary circulation, and, in a considerable dose, true hyperæmia and sanguineous stasis.

"Angina and erythema produced by belladonna are analogous to the inflammatory process.

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* In this family are also included tobacco, henbane, datura, stramonium and the dulcamara; as also the tomato, egg-plant, potato and capsicum. PROF. A. GRAY, p. 456.

XVII. "The modification of the urinary secretions are dependent upon the variations of the arterial tension.

XVIII. "Belladonna is not a paralyzing agent to the smooth muscular fibres; it produces no phenomena of paralysis except in a very powerful dose, and in these cases it follows exaggerated contractions; thus it is of benefit in incontinence of urine and of the fæces, in paralysis of the bladder, in constipation, irreducible hernias, &c.

XIX. "Atropine has no elective action upon the sensitive nerves. Its local application is always followed by acute and persistent pain. Atropine acts only upon nerves in a state of hyperæsthesia and often determines analgesia, but it should be applied directly upon the seat of pain (les nerfs affectés).

XX. "Small doses of atropine augment, toxical doses diminish, the temperature.

XXI. "Atropine, especially, possesses the property of causing dilatation of the pupil, and this is its most constant and persistent effect.

"It paralyzes the terminal branches of the third pair of nerves; this is the only fact well shown by experimental physiology, in the study of the hyoscyamus also. (Gubler, Mydriasis caused by Belladonna.)

"To this paralysis of the ciliary branches of the nervous motor ocularis communis is attached the paralysis of the muscle of accommodation.

XXII. "Certain experiments and several considerations that have been made public by the author, tend to show some exciting action upon the sympathetic nerve or upon the *dilatateur*. However, a more vigorous demonstration is still essential." *

INTERESTING AND UNUSUAL CASES OF TRAUMATIC INJURY OF THE EYE.

Read before the Boston Society for Medical Improvement, Feb. 22d, 1869, by HENRY W. WILLIAMS, M.D., President of the American Ophthalmological Society; Ophthalmic Surgeon to the City Hospital of Boston.

Fragment of Steel discovered in the Retina by means of the Ophthalmoscope, four months after its Entrance into the Eye.—Feb. 13th, 1869.—I saw Mr. F., whose left eye had been struck by a fragment of a steel die four months previously. He described a considerable sub-conjunctival ecchymosis as having been the chief symptom observed at the time of the injury, and after this became reabsorbed, at the end of a few days, his eye had become, and still continues, sufficiently good to allow him to resume his work of straightening blades of a machine, along which he takes sight with this eye as he has always done in preference to the other, this being as he has thought his best eye, and he being left-handed. He still reads a newspaper print with this eye, and reads No. xii. of test types at ten feet. Thinks it quite impossible that any fragment of steel can have entered the globe. His pupil is somewhat dilated and immovable, and the iris has a darker color than in the other eye. By oblique illumination, a small cicatrix is visible in the sclerotica, in the region formerly the seat of the ecchymosis; but no opacity of the transparent media can be found. His field of vision is free from obscurity, except in a small space towards the upper and outer portion, where he does not perceive objects.

Examined with the ophthalmoscope the larger part of the fundus of the eye appears normal. At the lower and inner part of the retina, in the direction indicated by the obscure spot in the field of vision, and opposite to the scleral cicatrix, is to be clearly seen a small wedge-shaped fragment of steel, having its point imbedded in the ocular tunics, and a considerable part of its dimension standing out from the retina into the vitreous. No opacity of vitreous exists in its neighborhood. An agglomeration of pigment has formed in a small circle about it, and there is a faint appearance of choroïdal injection at one point only. The optic disc is slightly injected and its outline rather ill-defined. This alteration, though having no apparent relation of continuity with the changes in choroïd and retina in the vicinity of the foreign body, is yet a very important evidence of want of toleration of the presence of the steel within the eye, and is of interest as regards the question as to the mode of propagation of sympathetic inflammation from one eyeball to the other.

Rupture of the Sclerotica and Dislocation of the Crystalline Lens beneath the Conjunctiva, by a Blow from a Cow's Horn.—Feb. 18th, 1869.—I saw Mr. P., who in stabling his cow, a fortnight previously, was struck a sudden blow with her horn in the right eye. Only very moderate pain was felt at or since this time. His condition is as follows: The crystalline lens lies beneath the conjunctiva, between the cornea and the outer canthus, the rent in the sclera through which it passed being concealed behind it. The sclerotica also bulges somewhat at the upper side of the cornea. The fundus of the eye cannot be seen with the ophthalmoscope on account of turbidity of the internal media; but the cornea is uninjured and transparent. The patient complains of only slight annoyance from the presence of the lens in its unusual situation, and the eye is only moderately injected.

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* Meuriot, op. cit. p. 138, et seq.

The lens was at once extracted, and a suture inserted to bring together the edges of the wound in the conjunctiva and prevent any loss of vitreous. Vision is not to be hoped for, the eye having undergone, as it were, a crushing process, but there is reason to hope that the eye may retain nearly its normal size and appearance.

"A CASE OF HERPES ZOSTER."

By **Albion Cobb, M.D.**, Webb's Mills, Me.

The elaborate article with the above title in the Journal for January 28th reminds me of a case of the same disease, in some respects the parallel of the one there given, which occurred in my practice.

E. B., of Casco, Maine, about 50 years old, robust, muscular, vigorous and healthy, was attacked, just about two years ago, with shingles, affecting the left side of the neck and face. Immediately on the appearance of the eruption, the left side of his face became paralyzed, exhibiting all the ordinary symptoms of facial paralysis, the most striking of which, to a casual observer, were the permanently open eye, the mouth drawn to the opposite side, and the complete want of expression in the affected side. As he treated his disease with "sovereign contempt," and kept about his ordinary business, he was not very closely observed, but the two diseases, if two they were, ran their course concurrently, and disappeared together, and Mr. B. has been perfectly well ever since.

It may be proper to state here, that, by a curious coincidence, I had under treatment, at about the same time with Mr. B., two or three cases of herpes zoster (no others of the face), and two or three cases of facial paralysis, but this is the only instance in which they occurred together.

Two or three days ago my attention was called to another case which may possibly have some bearing on the connection or relation between herpes zoster and the underlying nerves.

Capt. ———, of Casco, had, about six years ago, what he and his attending physicians called shingles, covering a belt of the ordinary breadth, about the middle of the right side of the chest. The principal distress, during the course of the disease, arose from a neuralgic pain, of a severe burning character, seeming to be seated deep in the tissues beneath the eruption. The eruption ran its usual course and disappeared, but not so the pain. This has changed neither in degree, character nor location, but has persisted up to the present time, in spite of the efforts of physicians and others to remove it. From first to last, throughout the whole six years, it has affected exactly the zone formerly occupied by the herpes.

Feb. 10, 1869.

Hospital Reports.

Depression and Re-placement of the Superior Maxilla (Langenbeck's Operation).

Service of Dr. Cheever.

Case I.—*Naso-pharyngeal Polypus.*—(*Vide* Surgical Cases for 1867.) The patient was a student, aged 18 years. Thirteen months previously to his entrance to the Hospital for his present disability, he had undergone an operation for the relief of disease of which this was the recurrence; and the history of the growth dated two years and a half before that time. Its development had given rise to the following symptoms: profuse epistaxis, complete obstruction of the nostril, and the discharge of a thin and offensive fluid. Examination discovered the presence of a firm, lobulated tumor pressing down on the soft palate and filling the upper and back part of the pharynx. The general condition of the patient was good, and the growth was not painful.

Operation.—It was removed by temporary depression of the right upper maxilla, as follows: The primary incision was carried from near the inner canthus of the eye, downward along the fold at the side of the nose, around the ala, and through the commissure of the upper lip. The flaps were reflected so as to expose the body of the bone. The symphysis of the jaw was divided along the hard palate, and a section made with a saw across the bone from the tuberosity into the middle meatus of the nose. The section of the bone was depressed, so that it was held only by its posterior attachments. The tumor was thus exposed and reached. Its attachments to the body of the sphenoid bone and to the upper and back part of the pharynx were divided with some difficulty with scissors, and the point of section (two inches square) cauterized with strong nitric acid. The bone was replaced and held well in position by a wire around the adjacent incisor teeth. The soft parts were easily apposed and retained by silk sutures. The hæmorrhage was inconsiderable.

The constitutional disturbance which followed the operation was comparatively slight. With a dressing of equal parts of tincture of myrrh and water, the wound healed satisfactorily, and throughout the convalescence there was no complication to impede recovery. In nineteen days, the ligatures had all come away, and there was no purulent discharge. The bone was in excellent position, and motionless. After thirty-five days he was discharged well.

Symptoms of recurrence of the growth were noticed after eleven months. The nostril became obstructed as before, and there was a feeling of fulness in the head. Otherwise than this the tumor had caused no inconvenience. There was no appearance of any disease in the pharynx, but Dr. Langmaid, with the rhinoscope, discovered the fibrous mass occupying its former position and attached, like its predecessor, to the inferior aspect of the body of the sphenoid bone and to the adjacent region of the pharynx.

Second Operation.—The steps in the operation for its removal, the operation being performed at once, were almost identical with those of the former one, and the lines of section were in the cicatrices of those of the year previous. Owing, however, to the thickening of the bone in the course of healing, it was necessary to remove a small portion at the inner angle, just below the orbital process, in order to expose the growth. The tumor, which was of the size of an English walnut, was removed by section of its pedicle with scissors, and the bone was thoroughly scraped. The hæmorrhage was not sufficient to require ligatures. The bone and soft parts were apposed as in the former operation; a gutta-percha plug between the teeth and a bandage around the lower jaw, and over the head, aided in supporting the parts.

Convalescence, in this case, was more rapid, even, than in the primary operation. Without complication or drawback, recovery proceeded steadily, and after twenty-seven days he was discharged with the wounds perfectly healed, and the bone firmly in place.

CASE II.—*Naso-pharyngeal Polypus. Operation by Temporary Depression of both Superior Maxillæ.*—The patient was a farmer by occupation, and was 41 years old. He had suffered from the presence of a growth in the posterior nares during the previous eleven years. Its first appearance was attended with profuse epistaxis. Its rapid growth, and the inconvenience arising from its presence induced him to submit to its removal by Dr. Peaslee, by section of the soft palate, after four years. An interval of health succeeded, in which he noticed nothing of consequence from the tumor; but thirteen months before presenting himself at the Hospital he felt symptoms of its recurrence. This recurrent growth had been attended with no pain, epistaxis or other grave symptoms, although the patient was anæmic, and his mental condition was depressed and anxious.

Examination discovered the following condition of things. Externally, the facial expression was unaltered. There was no protrusion about the region of the antrum. Both nostrils were perfectly occluded, one having been closed many months, while the other had remained open until within three weeks. The palate was pressed down by a tumor protruding from the roof of the mouth, of the size of a pullet's egg; its anterior edge extended to within half an inch of the alveolar border. It was elastic, painless, and without special tenderness. In the process of development it had absorbed the palatine process of the left superior maxilla, the edge of the bone defining its border. The pharynx was clear, below the soft palate, but completely filled above.

Deglutition, respiration and articulation were considerably impaired, and complaint was especially made of the difficulty in breathing, the sensation being of fulness and of a danger of suffocation.

Operation.—The size of the tumor and its situation in the median region, appeared to contraïndicate operation on one superior maxilla alone. Temporary depression of whole upper jaw was accordingly effected, as follows: The primary incision through the soft parts was on either side of the nose along the natural wrinkle from near the inner canthi, around the alæ and through the commissure of the myrtiform fossa of the lips. The flaps were freely reflected, so as to expose the bone beneath as far upward as the malar prominences. With a narrow saw the body of the bone was divided from the tuberosity, forward, beneath the zygoma on each side into the middle meatus. The septum nasi and the vomer were divided with strong scissors. Nothing but the posterior attachments of the upper maxillæ now prevented their depression; and hinging on the pterygoid processes, the upper jaw was brought down so as to expose the tumor. Its attachments were found to be to the body of the sphenoid bone, and to the ethmoid. These attachments, except the first, were divided by the finger, and a section of the growth was made by means of scissors, as near the sphenoid bone as possible, the mass being too large to deliver altogether. With a gouge chisel the remaining portion was scraped away and removed.

The whole growth was in size and shape like a large lemon. In its centre it contained a cavity with the remains of broken-down tissue. Subsequent microscopic examination determined the structure to be distinctly fibrous.

The depressed jaw was restored to its position and retained firmly by silver wire passed on each side through the malar bones. The soft parts were apposed by silk sutures; and the whole physiognomy perfectly reinstated.

The hæmorrhage during the operation did not appear to be excessive, the blood escaping externally being only of moderate amount. The attendant shock was considerable, the pulse falling off at the last until it was hardly perceptible. Stimulants by enema rallied the patient in part, but throughout the day he remained in a drowsy, unconscious state after the effects of the ether had ceased. The condition of the patient was grave from the time of the operation forward. In three hours a diarrhœa developed itself, the dejections being frequent, black, tarry and offensive, as of altered blood. Meanwhile there was no pain or nausea; the patient took nourishment, stimulants and opiates well. The pulse ranged from 128 to 136, and was small, jerky and feeble. The whole appearance was that of a patient sinking from exhaustion. The expression was listless; the skin dry and harsh; the tongue brown and parched. During the forty-eight hours after the operation there was no essential change. The diarrhœa, abdominal pain and general exhaustion continued. The wound in the face remained quiet, without sign of reaction, and there was no complaint of pain in that region.

On the third day, after continued efforts at stimulation and at control of the diarrhœa, the patient began to show more favorable symptoms. The dejections became less frequent and more natural in appearance. The mental condition was more sane. Slight suppuration commenced in the wound. The surface was warm and moist, and general signs of reaction became manifest.

On the following day, however, he relapsed into the former state. Jactitation, muscular tremor and mental distress succeeded. The pulse was 124, and very small; the urine was retained and catheterization was necessary. The face and conjunctivæ assumed a sallow hue. Steady sinking proceeded in spite of the stimulants, which from the beginning had been taken freely, and on the afternoon of the fifth day, one hundred and twenty hours after the operation, the patient died.

The removal of naso-pharyngeal polypi, otherwise unassailable, by a temporary displacement, instead of destruction of the superior maxilla, is known as Langenbeck's operation.

Performed here, for the first time, in the case described above, it was *repeated*, successfully, on *the same patient*.

The second patient was treated in a manner novel, so far as we know, the operation including both superior maxillary bones. Although he succumbed, we cannot but think that there is nothing in the operation itself, which should render it a fatal one. We know, at any rate, that much more serious mutilation of the jaws and face, in removing cancer, is almost always survived. The hæmorrhage was moderate, and the shock should not be excessive.

Our patient was feeble and anæmic from suffering and abstinence. The pulse was poor from the beginning. He never rallied any higher than the state known as "prostration with excitement."

We should not hesitate to repeat the double operation on a suitable case, unless resort were had to a novel plan proposed by Ollier, to saw down the nose obliquely from above downwards, and operate through the upper meatus. In this way he removed a polypus weighing six ounces.

Bibliographical Notices.

The Preventive Treatment of Scarlet Fever, By Peter Hood, M.D. An article in the *British Medical Journal*, Feb. 6th, 1869, p. 117.

The *British Medical Journal* has been lately favored with several remarkable articles—remarkable for the complacency with which the writers announce their ability to prevent disease, or, "next point of importance" (Hood), to treat it with unerring success whenever occasionally appearing through the ignorance or carelessness of others. A few more such articles and journalism is over, and the profession itself ended—there will be no "suffering humanity" to relieve.

Dr. Budd's article we recently noticed in this Journal. He merely puts a stop to the disease; Dr. Hood comes up manfully to crown the work "with a matter of even superior importance—namely, the means by which we limit" the amount of disease in the individual attacked. Dr. Budd confined his observations to the destruction of the scarlatinal germ by "*external* appliances," Dr. Hood supplements these observations by his "experience of the *internal* treatment of scarlet fever."

"It is ten years," says Dr. Hood, "since I wrote a book which I was bold enough to designate as *The Successful Treatment of Scarlet Fever*. . . . . I have not lost a patient with scarlet fever" (did ever charlatan do better?) "since it was published, nor during many years preceding its appearance, when" (mark the caveat) "I have attended the patient from the commencement of the illness. I have been consulted in cases that have ended fatally, but this had been when the time for medical aid had passed, and the treatment which I advocated had not been employed"!

Delays are dangerous, says the proverb, but here they are fatal; *Dr. Hood* should be sent for early! After such neglect, "it must not be expected," he says, "that malignant cases . . . . can always be successfully treated by any form of treatment."

But what does he do for it? Let him speak for himself:—"To maintain the integrity of the blood as much as it is possible is one great object in the treatment of scarlet fever. In proportion as we can accomplish this, so will our success in the treatment of the disease be satisfactory or otherwise."

. . . .

"I have never known convulsions to occur unless the most common premonitory symptom—namely, vomiting—had been absent; and I can also say that, when vomiting has been induced, the convulsions have ceased.

"In the ordinary run of cases the first symptom usually complained of is headache, next soreness and swelling of the throat, followed by vomiting, and we find that the afore-mentioned symptoms are relieved by the vomiting taking place. The healthy action of the liver is interfered with, and the bile, instead of taking its natural course, finds its way into the stomach, and is invariably found in the matters ejected. Hence the importance of giving an emetic at the onset of the fever, if vomiting have not occurred. . . . There is more to be apprehended from the absence of vomiting than when it is in excess. The perverted course of the bile points to a defect existing in the liver, which defect is one of congestion. Here, again, we are called upon to assist nature in relieving this important organ; no medicine operates so beneficially as a dose of calomel and scammony. And if we take the appearance of the tongue as our guide throughout the whole period of the fever, and when it is otherwise than perfectly clean, administer gentle alterative medicines, to sustain the healthy action of the liver, we shall most effectually prevent dropsy from occurring, and avoid deafness and all the other sequelæ attendant on this disease.

"When the stomach has been relieved by vomiting, either by the operation of nature or art, and the liver and bowels also, by the administration of an efficient dose of medicine, it is then the proper time to avail ourselves of the antiseptic property of quinine, *which drug is, according to my experience, as powerful in destroying the scarlatinal germ as it is potent in the cure of ague.* I do not hesitate to say that if the previous injunction as to the emetic and purgative are attended to, any medical man who has never before employed this medicine in the treatment of scarlet fever, will never employ any other when he witnesses the gratifying progress of a case only twenty-four hours after using it. He will find the pulse diminished in frequency, the soreness of throat and difficulty of swallowing scarcely complained of, obviating all necessity for the use of gargles, sponging, caustics, &c., the heat of the skin most sensibly decreased, and the restlessness, frequently so distressing a symptom, succeeded by a calm composure. In the worst forms of scarlet fever, in which the blood of the patient is in a dyscrastic state, indicated by virulent coryza, discharges from the mouth, eyes, and ears, owing to the disintegration of the mucous surfaces, it is imperative to administer iron with the quinine, and suitable doses of the tincture of sesqui-chloride of iron, or of the sulphate of iron, should be diligently persevered with; at the same time paying strict attention to procuring a daily alvine evacuation."

It is no wonder that a physician, who intends to carry out such a course of treatment as indicated in the foregoing extracts, for a disease which in a large majority of cases needs no "treatment," should wish to be called early; and certainly if his patient dies he cannot be said to lose him by scarlet fever. The wonder is that a "little girl" whose case is given as an example (we hope it will prove a warning also) could survive such management for "three weeks." It certainly was a marvellous recovery.

We see that Dr. Hood is not inclined to take Dr. Budd's dictum in the matter of disinfectants. It is a pity, for when two such positive authorities differ, science suffers. Hear him, and note the criticism on his colleague's way of putting things:—

"Before I finish this paper, I must refer to one other subject connected with the treatment of scarlet fever, which I regard almost as important as the use of quinine itself. This is the disinfection of the sick room by the employment of chlorine; and here I must differ from what Dr. Budd's experience has led him to say on this subject. . . . .

"Dr. Budd has not told us in what manner he has employed disinfecting agents, chlorine more especially, to enable us to judge whether his method of using them were likely to be efficient or not.

"My experience of the beneficial effects of a free use of chlorine is directly opposed to Dr. Budd's views, and I am able to state from my own observation that, if this gas be properly used in the sick room of the patient, *the contagion of scarlet fever will be confined to that room*. My method of using it is as follows: I direct large coarse towels to be saturated with a solution of chloride of lime" (strength not stated by the writer), "and hung over the backs of chairs, and a sheet to be hung in front of the bedroom door. We may judge of the quantity required for disinfecting the room, by smell and taste (!) on going into it. This process should be continued throughout the course of the fever."

Although the profession is usually quite ready to seize upon any measures promising to exterminate, or even to relieve disease, English physicians do not yet appear to practise according to "book," though published ten years ago, for Dr. Budd states that "every year scarlet fever slays from twenty to twenty-two thousand persons in England alone."

In short, the appearance of these two papers, with another (January 30th) announcing the discovery of the "*only possible source of tubercle*" and a method to bring its ravages "to an absolute and permanent close," in a journal of such high pretensions, indicates a state of medical science in the United Kingdom hardly to have been anticipated in benighted places on this side of the water.

X. Y. Z.

We have a fellow-feeling for the afflictions of the *British Medical Journal*. It is like steering between Scylla and Charybdis for an editor to avoid, on the one hand, cramping the free expression of opinion, and on the other to keep his columns from being cumbered with chaff.—Ed.

Medical and Surgical Journal.

Boston: Thursday, March 11, 1869.

The hope we ventured to express in the Journal of Feb. 11th, that the valuable letter from Dr. Dalton which we published in that issue would not be the last communication of the kind we should be able to offer, is now realized. Our readers are now addressed by "the Professor," who speaks to them as the *Autocrat* of our to-day's Editor's table.

The Dental Cosmos: A Monthly Record of Dental Science. Edited by J. H. McQuillen, D.D.S., George Ziegler, M.D. Observe, compare, reflect, record. Philadelphia: Samuel S. White publisher. New York, 767 and 769 Broadway; Boston, 16 Tremont Row; Chicago, 100 and 102 Randolph Street.

The formation of a Dental School in connection with the Medical Department of Harvard University, naturally draws the attention of those engaged in medical teaching to the branch which has sought and gained their alliance. It soon becomes apparent that Dentistry has assumed an importance as a specialty of the healing art, which challenges for it an honorable recognition. The dentist of to-day stands in the same relation to the tooth-puller of a past generation as the surgeon of our time to the well-remembered worthy of the razor and the lancet, who trimmed his customer's hair or breathed a vein for him with equal skill and science.

Two arts are absolutely necessary to make old age tolerable; that of the optician and that of the dentist. Take away the old man's spectacles and leave his jaws to be dismantled without repair, and what will life be worth to him? No wonder those very sensible people we call savages, not having either of these helps, expect their children to see that they are not left to such a fate. When the eyes of the venerable warrior can no longer read the literature tattooed on his enemy's skin, when he has lost his teeth and can no longer do justice to the *pièce de résistance* furnished by the last skirmish of his tribe, his eldest son kindly dismisses him by a single blow of his war-club to that better region where the good cannibals go, and become vegetable feeders as we charitably trust.

What would the old age of civilized life be—even in *Boston*—without convex lenses to help the failing sight; jaunty eye-glasses for public occasions, honest old straddling spectacles for solitude? No "Advertiser" —no "Transcript"—no "Atlantic"—no "Every Saturday"—no "Boston Medical and Surgical Journal"—would not the wretched dweller by the Frog-pond be glad to introduce the popular institutions of the South-sea islanders?

Or take that other wrong of advancing years, the bitterest insult to the decaying bodily fabric which precedes the last "disgrace and ignominy of our natures," as death is spoken of by Sir Thomas Brown. To have the broad manly jaws, once glittering with enamelled ivory, changed to the miserable likeness of a turtle's, by the gradual absorption and thinning of their edges; to meet one's friends with a face that shuts up like an accordion; to mumble inarticulate words with organs that once held the listener captive with speech or song: to come back of necessity to the pulpy food of childhood, without its innocent appetite and unquestioning digestion—what a fate to think of! and yet that is what nature has in store for the old and for many who are not old, save that art comes in and with infinite skill and almost miraculous success arrests the progress of destruction and repairs and restores the waste that Time has already made. That was a most impressive testimony to the need of these organs to make life tolerable which was reported a few years since, in one of our periodicals, of a celebrated personage. He had lost his mind, he said, but that he could do without; but he had lost his teeth and could not eat —this was the burden of his old age.

Those who have been led to take an interest in dental matters will be glad to know where they can learn of the condition and progress of an art which is every day coming nearer to a science.

The *Dental Cosmos*, a monthly journal, published at Philadelphia, is an organ of the dental profession which has so many excellencies that it deserves to be known outside the immediate circle of those for whom it is more especially intended. The object of this communication is to direct attention to it as containing much information which will prove useful to any intelligent practitioner.

The first point about it that strikes the reader is the handsome form in which it presents itself, comparing very well for elegance with that of the leading literary journals. The eye is next attracted by the great number of illustrated advertisements, by looking over which one may get a very good idea of many of the mechanical novelties, the chairs, plastic as cataleptic patients and rigid as these are, when any position is once fixed for them; the noiseless lathes; the remorseless forceps; the searching excavators; the wicked nerve-extracters—most of which we have seen and some of which we have felt, the greater number of us, and the many other contrivances which recommend themselves to the great community of dentists.

To give some notice of the character of this Journal, let us examine a few of the last numbers, and glance at one here and there of older date. And first as to the way the Journal is made up. The number for January, 1869, for instance, begins with twenty-five pages of original communications. Then, follow the pages of the Proceedings of Dental Societies. Then four pages of Editorial Matter. Then a Legal Opinion in Rubber suits—cases in court, not waterproof garments. Then "Periscope of Medical and General Science in their relations to Dentistry," sixteen pages. With regard to this last department, it is only justice to say that it is an admirable selection, which cannot fail to interest every medical reader. Few of our medical journals get together so many valuable selections in so small a compass. Dr. Ziegler shows an extent of reading and a good judgment in his management of this department deserving of special commendation.

The original articles are of various degrees of merit, from the most valuable practical papers of men whose skill is known to the world to the modest essay of the young practitioner whose intellectual first molars, just emerging, show promise of a better furnished mental arch by and by.

In this January number, which is taken as a specimen only because it is the last, the first article is a practical one on *pivot teeth*, which we learn have been rapidly falling into disuse, notwithstanding their advantages. When it is remembered that a fang has been known to support an artificial crown forty years, as a writer in another number of the "Cosmos" tells us, mentioning the gentleman who had carried it all this time, we may see what advantages this mode of repairing damages must present in certain cases.

Dr. Evans, of Paris, known everywhere, writes on the Physiological Action of Nitrous Oxide Gas, a subject which is of course interesting in his hands. Dr. R. Shelton Mackenzie contributes a very curious and very pleasant paper on the Disinterment of the Remains of William Rufus, historical, archæological and dental in its character. A second instalment follows of "The Inhabitants of the Mouth and Teeth"—a microscopic examination of the fauna and flora—the forests, meadows, mushroom beds, menageries and breeding places of that well-stocked region of the human body which we call ours, as if it were not the paradise of an innumerable creation for which we are the purveyors. Dr. Crowe writes about "Soap as a Dentifrice" and quotes Dr. Francis of New York—not referring to the labors of Dr. Bowditch, of which he should be reminded. An article by Dr. Latimer, giving the results of experiments on staining the dental tissues, and a new case of third dentition complete the list of original contributions, which may be read from beginning to end with profit and pleasure. Among the "Proceedings of Dental Societies" the report of the meetings of the Odontographic Society of Philadelphia is particularly interesting, as it has generally proved in preceding numbers. The microscopic preparations of Mr. Walmsley and those of Mr. Starr, specimens of both of which were kindly forwarded to the writer of this article, excited just admiration. Three microscopic botanical specimens of the former gentleman's preparing, presented by him to the writer, delight all who see them by their singular beauty. The senior editor of the Journal confirms some of his former results, to be mentioned presently, as to the effects of narcosis produced by nitrous oxide, and refers to some new observations as to their effect on the blood corpuscles. Then follow the numerous valuable excerpts from the different journals which have been already commended for their excellence as a selection.

This is certainly a good list of contents for any monthly Journal, and there is nothing in it as a whole which distinguishes this number as of more than average excellence.

Running over our file of the *Cosmos* for the last two years, a few articles which happen to attract our attention may be referred to.

A valuable table in the number for February, 1867, gives the location of decay in 694 cases. Following this is a brief article in which we find this very striking and suggestive statement. "I will merely mention one analogy which is well known, and has, I think, been before mentioned in this connection, that in the teeth of neat cattle, as they roam their native pastures, decay is never known, while in their "artificial mode of life," in the swill-milk stables, the teeth suffer the same phenomena of decay as do those of man."

Prominent among the original contributions are those of the Senior Editor, Prof. McQuillen, on the microscopic anatomy of the teeth. His preparations, illustrated by figures in the text of his articles, demonstrate in the most satisfactory manner the *interglobular spaces* described by Czermak, and reproduced in the American edition of Kölliker's Microscopic Anatomy. The writer is familiar with these specimens, some of which have been sent him by Professor McQuillen, showing just the aspect figured by Czermak, and are constantly used in demonstrations before the classes at the Medical College. There was some unwillingness to accept the "interglobular spaces" which these very successful preparations were quite sufficient to overcome. Not more interesting, perhaps, but of more immediate practical importance, are Prof. McQuillen's experiments performed before the members of the Odontographic Society and the Biological and Microscopical Department of the Academy of Natural Sciences, to test the statement of Dr. B. Ward Richardson, of London, as to the fatal effects of nitrous oxide on animals. These valuable experiments, showing that animals readily recover from complete narcosis produced by the gas in question, are to be found in the number for last October. Since those experiments Professor McQuillen has kept a rabbit completely narcotized by the same agent more than an hour without any permanent injury.

Dr. Thomas W. Evans, of Paris, suggests the use of nitrous oxide liquefied by pressure. Liable to blow up, says the timid practitioner. Of course it is, says Dr. Evans—so is a soda bottle.—Why not a stub-twist flask in one's pocket by and by, with a hundred gallons, more or less, of condensed gas in the volume of a pint, with no more fear of its blowing up than we have of a gun or a pistol?

A singular case of hemiplegia, accompanied by the symptoms long known under the somewhat equivocal name "spinal irritation," apparently relieved by the extraction of decayed teeth, is reported by Dr. J. L. Suesserott in the number for November, 1868.

Dr. Flagg's four articles on "Arseuious Acid as a Devitalizer of the Dental Pulp," will be valued by all the working members of his profession.

And lastly, we may mention as of the first importance for the consideration of every dentist, an article by Dr. J. T. Codman, of Boston, on "Artistic or Expressional Dentistry." It is perfectly true, as Dr. Codman says, that the natural teeth are the best guide in replacing those which are gone; but if these are all lost, judgment and the eye of an artist are necessary to give or restore the normal expression.

How many pitiable instances does this very useful paper recall of friends whom we have known as public characters, whom we knew by their portraits, whose whole physiognomy has been utterly changed by their dentist! Perhaps the contour of Washington's majestic face could not have been preserved after he was forced to trust himself in the hands of the dentist, but one cannot help thinking that if some of our skilful practitioners of to-day had had the shaping of that immortal *ratelier* which lies behind the lips to which the statuary and the painter tried in vain to give expression, the Father of his Country would have looked upon us with a still nobler aspect. And with what a sad surprise do we greet our friend who has just come from the hands of some tasteless workman in dental porcelain, who has filled his mouth with a set of "dominoes," as the pugilists call them, staring and glaring and cheating him of all his natural expression, so that to talk with him is like making a new acquaintance, and we feel as if we were taking a liberty in speaking without an introduction!

The Dental Profession is doing itself great honor by the breadth of the studies which it encourages as well as by the vast amount of ingenuity which it calls into exercise. The debt of mankind to its labors is incalculable. Many a man, still more many a woman, would rather not live at all than live disgraced by the wrongs of nature—if we may lay the fault to nature and not to artificial habits—shut out from all the charms of social intercourse by imperfect articulation and the sense of deformity, and it may be condemned to invalidism by failure of the first process of reduction of the food. There is nothing the dental art does not attempt, and hardly anything within the bounds of reasonable belief it does not accomplish. It fills the teeth that would have been gone in a year, and makes them last a lifetime. It builds up a new fabric on what seemed the most worthless foundations, until like a monarch, the ancient fang wears a crown of solid gold, and the miracle of the legend is made an every-day fact. It straightens the most perverse irregularities, weeds the over-crowded arches, fills the gaps which disenchanted the smile of beauty, enamelling the delicate substitute to the exact shade of the lost pearl, lulls the patient into a pleasing trance while it clears away the incumbrances that no longer serve him, and makes him once more comely and happy with a third dentition of gold and porcelain.

It is a pleasure to pay a tribute of respect to such an art, and to call the attention of all who love medical literature to a Journal like the *Dental Cosmos*. O. W. H.

Feb. 4, 1868.

NOTES FROM THE UNION MEDICALE.

Poisonous Dye-stuff in certain English Hosiery—Coralline, or Peonine.—Our readers are familiar with the accounts of the poisonous effects alleged to have resulted from the use of certain English stockings having a peculiar red color. There have been various theories of the chemical composition of the dye producing the noxious results described. Prof. Tardieu has been investigating the matter.

In May, 1868, M. Tardieu, before he was cognizant of the facts which have since become so widely known, was consulted by a young man, 23 years old, of admirable constitution, and exempt from all herpetic taint, who was affected with a vesicular eruption on both feet. The eruption, which was quite acute and very painful, might, at first sight, have been taken for eczema. It was limited with precision to the part of the foot covered by the shoe, involving both the upper surface and the sole, and not extending backwards beyond the "roots" of the toes. The skin was violently inflamed, swollen, of a uniform redness, and studded with innumerable little vesicles, which at certain points, especially on the sole, united to form large bullæ filled with a sero-purulent liquid. There was general *malaise*, fever, headache, and sickness at the stomach. Emollients and repose were enjoined. In two days the general symptoms had disappeared. But the feet did not get well under about three weeks. In another case, stockings striped with the color in question were used; and the inflammation of the skin was, here, limited to the parts in contact with the red lines. An American lady in Paris was similarly affected from wearing silk stockings of the mischievous red color.

A skilful chemist, M. L. Roussin, assisted M. Tardieu in his experiments. They took the socks worn by the young man first mentioned, and soaked them in cold water, boiling water, acidulated water, and water rendered alkaline; but obtained nothing soluble. Alcohol, however, boiling at 85 degrees (centigrade, probably), rapidly dissolved the red coloring matter. By evaporation to dryness, an extract was obtained. This extract, re-dissolved in a little alcohol, was injected under the skin of a dog, of a rabbit, and of a frog. The three animals died—the frog in four hours, the dog in thirty-six hours, the rabbit in two days. The dog and rabbit had excessively abundant and almost incessant stools.

The coloring matter, M. Tardieu says, being called *coralline* or *peonine*, is derived from *acide rosolique*, which is in turn obtained by oxidation from phenic (carbolic) acid. Having obtained specimens of it from M. Persoz *fils*, who discovered it in 1860, M. Tardieu made further experiments with it on animals, which showed it to be a violent poison. *Post-mortem* examination revealed violent inflammation, with purulent infiltration of the cellular tissue at point of injection; stomach healthy; intestines distended with an enormous quantity of liquid fæcal matter, and presenting manifest traces of acute inflammation of the mucous membrane; liver affected with fatty degeneration, demonstrated by the microscope. M. Tardieu lays great stress on the fact that the lungs were beautifully and uniformly tinted with the coloring matter. This substance, having been extracted from the lungs and livers of the animals poisoned with it, dyed a skein of silk with its own tint.

M. Tardieu compares the action of coralline to that of croton oil, both in its local and general effects; and asks if the symptoms produced in the human subject by the former—fever, headache, vertigo, nausea—were simply provoked by the local inflammation, or if they were not rather the consequence and the indication of absorption of the poison. He also calls attention to the fact that the coralline is not soluble in water, and yet in producing the lesion of the foot, had no other solvent than the secretions of the skin. This became the point of departure for a discussion (which was, as it were, adjourned without being decided), at the Imperial Academy, as to whether certain substances not capable, while in watery solution, of absorption by the skin, can be absorbed by the cutaneous surface, when they are in the form of powder, or mingled with oily matter.

In the course of the discussion, it was stated that M. Roussin, after having remained for five (5) hours in a bath containing five hundred (500) grammes of iodide of potassium in solution, was unable to detect the slightest trace of that substance in the urine or the saliva. But, after having left the bath, he allowed the moisture to evaporate from the surface of the body, so as to leave a layer of iodide of potassium on the skin; and, in a little while, the salt was detected both in the urine and in the saliva.

Chronic Albuminuria of a Benign Character.—M. Dumontpallier has been the medical adviser, for some years, of a young man, of gouty habit, whose general condition, says Dr. D., is so satisfactory that he would never be suspected of having albuminuria, but in whom the urine contains albumen. On the basis of this case, M. D. claims that there is such a thing as a chronic albuminuria of long standing, which is not necessarily the expression of a grave deviation from health. The reporter adds that Rayer, who had given much attention to the disease, and also Trousseau, with his vast clinical experience, had both said to him, in their latter years, that much investigation was still requisite to complete the prognosis of albuminuria.

MASSACHUSETTS MEDICAL COLLEGE.—The following are the names of the gentlemen who received their degrees on the 10th inst., with their residences and theses annexed:—

Members of the Class graduating in Medicine.

Bassett, Elton James, *Taunton*, Scarlatina.
Baylies, Alfred Wood, *Taunton*, Rubeola.
Bent, William Henry, *Digby, N. S.*, Pyæmia.
Bradford, Enoch Freeman, *Turner, Me.*, Diseases of the Heart.
Brown, Henry Nelson, *N. Scituate, R. I.*, Diabetes.
Burden, Frederick Lysander, *Scituate, R. I.*, Hæmorrhage.
Buttrick, Abner Wheeler, *Lowell*, Tænia Solium.
Campbell, Duncan, *Inverness, N. S.*, Erysipelas.
Carter, William Gardner, *Concord, N. H.*, Typhoid Fever.
Chisholm, Donald, *Inverness, N. S.*, Absorption.
Cleaves, Royal Lewis, *Bridgeton, Me.*, Generation.
Clough, Benjamin Franklin, *Boston*, Intermittent Fever.
Collie, James Ross, *Pictou, N. S.*, Catharsis.
Daley, James, *Lawrence*, Endocardial Murmurs.
Davis, Sumner Danforth, *Scranton, Pa.*, Diphtheria.
Dodge, William Lovell, *Springfield, Vt.*, Dysentery.
Doe, Orlando Witherspoon, *Boston*, Lead Poisoning.
Dorsey, Thomas Graham, *Philadelphia, Pa.*, Prolapsus of the Uterus.
Dow, William Wellman, *Dover, N. H.*, Hæmoptysis.
Draper, Frank Winthrop, *Wayland*, Ergot of Rye.
Emery, Erastus, *Binghamton, N. Y.*, Hydrargyrum.
Fellows, Willis Mott, *Lowell*, Articular Rheumatism.
Fogg, Edmund Eastman, *Limerick, Me.*, Opium.
Fulton, Jonathan Borden, *Boston*, Inflammation.
Gage, William Hathorne, *Exeter, N. H.*, Inflammation.
Galligan, Francis Edward, *Taunton*, Amenorrhœa.
Goldsmith, Charles Almon, *Auburn, N. H.*, Spermatorrhœa.
Goss, Francis Webster, *Salem*, Digitalis Purpurea.
Hahn, Ammi Ruhamah, *East Boston*, Surgical Hæmorrhage.
Ham, Edward Bartlett, *Dover, N. H.*, Mechanism of Natural Labor.
Hibbard, William Warner, *Worcester*, Mind in Disease.
Hills, William Henry, *Westminister, Vt.*, Nervous Diathesis.
Hodgson, Abner, *Cumberland, N. S.*, Pneumonia.
Howard, Edwin Clarence, *Boston*, Puerperal Fever.

Johnson, Horatio Huntington, *Belfast, Me.*, Hernia.
Kent, John Bryden, *Nova Scotia*, Diphtheria.
Knight, Benjamin, Jr., *Providence, R. I.*, Hysteria.
Logan, William Henry, *East Boston*, Alcohol.
Mansfield, Henry Tucker, *Boston*, Acute Rheumatism.
Margeson, Charles Inglis, *Wilmot, N. S.*, Cerebro-Spinal Meningitis.
McCollom, John Hildreth, *Medford*, Hip Disease.
McKay, John Graham, *Charlottetown, P. E. I.*, Life and Death.
Newhall, Edward George, *Galena, Ill.*, Asiatic Cholera.
Nichols, Algernon Sidney, *Haverhill*, Syphilis.
Okie, Howard, *Providence, R. I.*, Tubercular Meningitis.
Parker, Francis Fullam, *Springfield, Vt.*, Vis Medicatrix Naturæ.
Pedolin, Ferdinand Lorek, *Fredericton, N. B.*, Pneumonia.
Peirce, Warren, *Mendon*, Diphtheria.
Pillsbury, Geo. Harlin, *Lowell*, Hypodermic Injections.
Reynolds, Henry, *E. Wilton, Me.*, Uterine Displacement.
Rose, Daniel Campbell, *Eastport, Me.*, Diphtheria.
Saunders, Daniel Oliver, *Nova Scotia*, Spermatorrhœa.
Simpson, James Laud, *Glassville, N. B.*, Diaphoresis.
Smith, John Peter, *Pictou, N. S.*, Placenta.
Stevens, Andrew Jackson, *Haverhill*, Ovariotomy.
Vail, William Edwin, *Sussex Vale, N. B.*, Digestion.
Wilson, Charles Alonzo, *Gardner*, Scrofula.
Wood, Edward Addison, *Groton*, Variola.

Members of the Class Graduating in Dental Medicine.

Freeman, Robert Tanner, *Washington, D. C.*, Importance of Preserving the Teeth.
Fillebrown, Thomas, *Lewiston, Me.*, Non-assimilation of Food as a Cause of Impaired Dentition.
Haley, Thomas, *Biddeford, Me.*, Dental Caries.
Page, Edward, *Charlestown, Mass.*, Nitrous Oxide.
Shaw, Samuel F., *Marlboro', Mass.*, Extracting Teeth.
Vincent, Joseph J., *Amherst, Mass.*, Dental Manipulations.

CHOREA. By SAMUEL WILKS, M.D., Physician to, and Lecturer on the Practice of Medicine at, Guy's Hospital.— . . . . A more usual opinion, however, is that the order of sequence is rheumatism, cardiac affection, and chorea; and thus a theory is held, which was first propagated by Dr. Kirkes, that embolic particles are carried from the heart to the spine, and there set up the irritation which is productive of chorea. This of course is a mere opinion, and not proved to be correct either in fact or in theory. . . . . . .

I should very much doubt whether chorea is due to any special disease of the spinal cord or other part of the nervous system, but rather, like epilepsy, due to a disturbance of the whole of the centres. That the brain is affected is shown by the occasional maniacal excitement and the more frequent tendency to imbecility. Just as in epilepsy you may find a sudden disruption or discharge of nervous force exciting the ganglia below, and temporarily suspending the action of the cerebral hemisphere in which the explosion took place, so in chorea the irritation is more continuous, and the movements consequently constant. Hence, when any extra work is put on the cineritious matter of the hemispheres, as when volition comes into play, the movements are increased. The common cause of fright would also seem to show that the first shock was mental, or imposed on the cerebrum. It is a condition in which the nervous centres have become irritable, lost their power, and the will is incapable of directing their action. A strong voluntary effort is capable for a moment of restraining the movements, but time is necessary for the power to be regained. In those cases where the complaint remains chronic, and more especially in those instances where the choreal movement is confined to one part of the body, it ceases to be a disease in the ordinary acceptation of the term; the movement is simply a bad habit. Just as the spinal cord is educated to perform ordinary routine movements, such as take place in walking or in playing a tune, when the mind is otherwise engaged, so the spinal cord may be badly educated, or have become habituated to produce certain strange movements, which require a great effort of the will or training to entirely overcome. In such chronic cases medicine is of little use. . . . .

Treatment.— . . . . Morphia, as far as I have seen, is useless. I can call to mind two cases where large doses were given, but the effect was only transitory. The same with chloroform; the vapor produces but a temporary tranquillizing effect, and our experience of it is not encouraging either in chorea or in the allied disorders, tetanus and hydrophobia. I have never seen strychnia of any use in the acute affection; and the same of belladonna and conia. In the less severe cases it is possible that one or two of these medicines may be useful, but I feel convinced that the class of medicines of which I speak—those which have a physiological action on the nervous system—are far less efficacious than the metallic tonics. It would seem that in order to produce a cure a bracing up or restoration of the original nerve power is necessary, and that the mere subdual of symptoms in no way tends to cure the complaint. When I say this I speak with some little hesitation of the effects of belladonna and conium, both of which remedies I have seen apparently useful. I remember when at Paris some years ago hearing Trousseau give a lecture on this disease and warmly recommend belladonna. On another occasion he was declaring that there was no drug in the Pharmacopœia equal to strong coffee, and on a third occasion he was vaunting the new gymnasium at the Hospital for Sick Children as the best therapeutic agent he knew. I mention this to show that there really is no specific treatment for the disease. I might say that we thought we saw some benefit in one case after the use of cannabis indica, but none whatever in four cases in which we tried the physostigma.

I believe I can tell you something very positive about the treatment of chorea, and I only wish I was enabled to make the same boast in reference to some other diseases. Many years ago, seeing that every medicine in the Pharmacopœia as well as several others out of it, were said to be equal to the cure of chorea, I determined to watch the disease untrammelled by medicines, and I found that in many cases a speedy recovery took place without the administration of any medicine whatever. . . . I should say that a weakened condition of the nervous centres being at the root of the malady, good nourishment and the tonic plan are necessary. . . . . I believe Dr. Elliotson many years ago acquired great fame by his success in the treatment of chorea, his remedy, as you know, being the red oxide of iron. We still give it, and it is one of the best of remedies; our children very willingly take half-drachm doses in treacle. Probably an equally favorite remedy here is the zinc—in fact, it is the medicine most commonly given, beginning with grain doses, and increasing to any amount, as a scruple three times daily. A favorite remedy of my late colleague Dr. Hughes was rhubarb steeped in port wine; the children were thus well kept up at the same time that the stomach and bowels were improved in condition. . . . . . —*London Medical Times and Gazette.*

Dr. Bateman's paper on Aphasia, read at the last meeting of the Medical Society of London, aimed another blow, if one were necessary, at Broca's defunct theory of localization of speech in the third left frontal convolution. Dr. Bateman gave a good *résumé* of opinions on the subject, and stated, in conclusion, that he doubted the existence of any centre of speech. He believed that aphasia might depend on want of co-ordinate action as well as upon appreciable lesions of the nervous system.—*Ibid.*

Suture of the Tendo-Achillis.—M. Delore, of the Charité Hospital, Lyons, relates the case of a boy, 9 years of age, who was brought to that Hospital twelve days after his tendo-Achillis had been cloven by a small hatchet. A separation of four centimetres existed between the two parts of the tendon. These were cut down to, and after some adhesions had been separated, and the edges of the tendon pared, these were brought into contact by four points of metallic suture. The leg was so fixed that no traction was exerted on the sutures. In from ten to fourteen days all the sutures were removed without union having taken place. There was, however, no separation, and the limb was kept in the same position, the starch bandage not being removed until the fifty-second day. Six weeks were required to restore the complete mobility of the limb after being so long fixed, but at the end of that time the boy had recovered complete use of the extremity. No separation between the ends of the tendon now existed, some adhesion having, however, taken place between it and the skin covering it.—*Ibid.* from *Bull. de Thérap.*, September 15.

Forced and Prolonged Flexion of the Limbs in Traumatic Hæmorrhage.—M. von Adelmann, of Dorpat, in a paper laid before the Belgian Academy of Medicine, and founded upon ten cases occurring in his practice, arrives at the following conclusions:—1. Forced flexion is a valuable means of arresting traumatic hæmorrhage. 2. It should be employed before having recourse to other hæmostatic agents. 3. It may be resorted to even in cases in which ligature of the artery has failed. 4. A knowledge of its mode of application should be properly diffused, so as to allow of its being at once adopted while awaiting the arrival of the Surgeon. 5. Such knowledge may also be very useful in armies. 6. It is very desirable that manuals of Surgery should bring the subject into prominent notice.—*Ibid.* from *Presse Belge.*

Neuralgia of the Internal Saphenous Nerve.—M. Bousseau related two cases to the *Société Médicale d'Observation*, which he believes may be thus correctly denominated. He says: 1. This form of neuralgia manifests all the characters observed in the neuralgias of the principal nerves of the trunk and limbs. 2. It is sometimes directed towards the termination of the nerve, and at others mounts up from these towards its main trunk. 3. It may exist alone or concurrently with neuralgia of other branches of the crural nerve, and with that of the sciatic nerve. 4. It is a very rare affection, and is promptly ameliorated by injections of sulphate of atropia.—*Ibid.* from *Gazette des Hôp.*

Labarraque's Wine of Quinium. By Wm. Procter, Jr.—A correspondent desires to be informed, through the columns of this Journal, of an easy method of preparing *Labarraque's Vin de Quinium.*

"Quinium" is a name given by M. Labarraque to the crude quinine or alcoholic extract of cinchona by lime. According to M. Dorvault (Officine p. 520, edit. 1858), it is prepared as follows: Take such a mixture of cinchona bark as shall contain about 2 per cent. of quinia and one of cinchonia, bruise it finely and add to it half its weight of hydrated lime in powder. Treat the mixture with boiling alcohol till exhausted, and distil off the alcohol from the resulting tincture by aid of a water or steam bath to dryness. The residue is *quinium*, which contains 33 per cent. of its weight in cinchona alkaloids. It is therefore very much richer in alkaloids than the best extracts of cinchona, and the preparations made from it are of course easily made more active, and as it is graduated in strength, more uniform.

Wine of quinium is prepared by dissolving 44 parts of quinium in 1000 parts of white wine, such as sherry and madeira; this is about equal to 35 grains to the pint. M. Dorvault says the dose is from three to six fluidounces in 24 hours as an antiperiodic in fevers, and from an ounce and a half to three ounces per day as a tonic.

We do not know the precise solubility of quinium, but may hazard the opinion that a stronger solution with a less dose would be preferable when the stimulating effects of the alcohol are not needed. —*American Journal of Pharmacy.*

The Communicability of Phthisis.—In a letter to the editor of the *Medical Times and Gazette*, R. P. Cotton, M.D., Senior Physician to the Hospital for Consumption, Brompton, says:—"My attention has but just now been directed to an abstract of a paper by Dr. Elliott upon the communicability of phthisis, in the last number of last year's *Medical Times and Gazette*. Dr. Elliott appears to be a firm believer in Dr. Budd's theory of the zymotic character of consumption, and supports his views by asserting 'the frequency of phthisis amongst the nurses of the Brompton Hospital.' As such a statement (given, I would observe, without any authority) is quite opposed to fact, and the question is of grave importance, I hope you will allow me, although somewhat late in doing so, to refer Dr. Elliott and those of your readers interested in the subject to a detailed report of mine on this very matter published in the *Lancet* of Nov. 2, 1867, as a reply to Dr. Budd's views. It will there be seen that the nurses and other resident and non-resident officials connected with the Hospital for Consumption at Brompton have been always remarkably free from phthisis, affording in this respect very evident and strong testimony in favor of the non-communicability of the disease."

Medical Miscellany.

The "Dearborn Branch" of the Boston Dispensary, thus named in honor of the late Benjamin Dearborn, the greatest benefactor of the institution, will be opened for the treatment of the sick poor on Monday next, the 15th inst.

The three rooms awarded by the City to the Dispensary are situated in the basement story of the new Charity Bureau on Chardon Street. The central room is to be devoted to the reception of patients, and the others respectively to the treatment of medical and surgical cases. The hours of service are the same as at the central office, viz., from 9 to 11, A.M., except on Sundays and legal holidays. This branch is intended for the benefit of the poor in the north and northwestern parts of the city. Provision has been made by which prescriptions can be purchased of a neighboring druggist at a very low cost by those who can afford it; others can be served as heretofore at the central office.

We trust the day is not far distant when the funds of the Dispensary will allow the establishment of similar branches in East and South Boston, as well as in the Highland District.

At a meeting of the Executive Committee of the Dispensary, the following gentlemen were elected to compose the staff at the new branch of the Dispensary:—As Physicians, F. E. Oliver, M.D., T. W. Fisher, M.D., Robert Amory, M.D., Thomas Waterman, M.D. As Surgeons, A. Coolidge, M.D., G. G. Tarbell, M.D., A. H. Nichols, M.D., H. H. A. Beach, M.D.

We regret to see that the Legislature of the State of Maine has indefinitely postponed the bill for the legalization of anatomy. It is obvious, we think, that either there can be no proper study of medicine in that State, or else anatomy will be studied with the aid of dissections, *legal or illegal*.

We tender our thanks to Messrs. Codman & Shurtleff for one of their "atomizing apparatus, No. 5." The instrument is worked by the hand, and is all that could be desired. Messrs. C. & S. furnish tubes which can be adapted to the air-driving part of the apparatus, for the purpose of producing local anæsthesia.

The same manufacturers have also sent us one of their improved steam atomizers. We have seen one of these in use by a patient, and it operates to the entire satisfaction of all parties concerned.

Grisolle died on the 10th of February last, in the 58th year of his age. He had been withdrawn from the world of science for three years previously, by a stroke of apoplexy. At the funeral, which recently took place in Paris, the pall-bearers were the Dean of the Faculty of Medicine; M. Blache, President of the Academy of Medicine; M. Husson, Director of *l'Assistance Publique*; and a member of [illegible] *Société Médicale des Hôpitaux*. Addresses were pronounced at the tomb by M. Behier, M. Chauffard, and M. Millard.

At the annual meeting of the Boston Academy of Homœopathic Medicine, January, 1869, Dr. Gregg said:—

"The discussion naturally leads to the consideration of the prophylactic properties of *belladonna* in scarlatina. In many instances he had administered this remedy with a view to prophylaxis. In some cases the disease did not occur in those to whom it was given, but in the majority of cases it was otherwise, the disease spreading to other members of the family with the same facility as if they had not taken the *belladonna*.

"He had seen an equal number of isolated cases of the disease in families where the *belladonna* had not been given as in those where it had. He therefore regarded the prophylactic powers of *belladonna* in scarlatina as wholly theoretical and unreliable."

Dr. Poulet, of Plancher-les-Mines (Haute-Saône), France, has sent in a paper to the Academy of Sciences, to show that alcohol, taken in large doses, is a sure specific in cases of poisoning by mushrooms, especially by those of the amanite genus.

Laryngoscopy was discovered in 1854, by Garcia, a London music teacher. Czermak, of Prague, first made the art available.

MEDICAL DIARY OF THE WEEK.

Monday, 9, A.M., Massachusetts General Hospital, Med. Clinic. 9, A.M., City Hospital, Ophthalmic Clinic.

Tuesday, 9, A.M., City Hospital, Medical Clinic; 10, A.M., Surgical Lecture. 9 to 11, A.M., Boston Dispensary. 10–11, A.M., Massachusetts Eye and Ear Infirmary.

Thursday, 10 A.M., Massachusetts General Hospital, Surgical Visit. 11 A.M., Operations.

Friday, 9, A.M., City Hospital, Ophthalmic Clinic; 10, A.M., Surgical Visit; 11, A.M., Operations. 9 to 11, A.M., Boston Dispensary.

Saturday, 10, A.M., Massachusetts General Hospital Surgical Visit; 11, A.M., Operations.

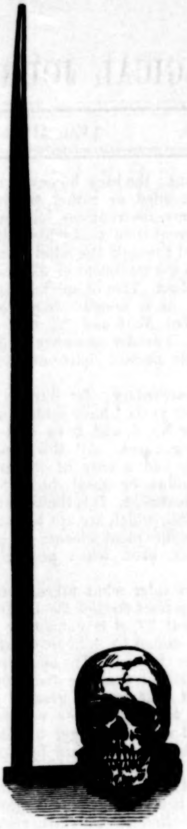
Errata.—The line in the second parenthesis on page 94 should read simply (Gubler), without the remaining words.—In the article on "Cerebral Amaurosis," in last week's Journal, for "optic tracks" read *optic tracts*.

To Correspondents.—The following communication has been received:—Neurasthenia, or Nervous Exhaustion. The paper on Disease of the Supra-renal Capsules will appear early in April.

Deaths in Boston for the week ending Saturday noon, March 6th, 119. Males, 59—Females, 60.—Accident, 1—apoplexy, 2—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 3—inflammation of the brain, 3—bronchitis, 3—cancer, 1—consumption, 15—convulsions, 1—croup, 4—cystitis, 2—dropsy, 1—dropsy of the brain, 5—dysentery, 1—erysipelas, 3—scarlet fever, 14—typhoid fever, 3—hæmorrhage, 1—disease of the heart, 6—hernia, 1—infantile disease, 4—intemperance, 1—jaundice, 1—disease of the kidneys, 1—disease of the liver, 2—congestion of the lungs, 3—inflammation of the lungs, 8—marasmus, 1—old age, 4—paralysis, 1—enlargement of the prostate, 1—puerperal disease, 6—unknown, 11—organic disease of the uterus, 1—whooping cough, 2.

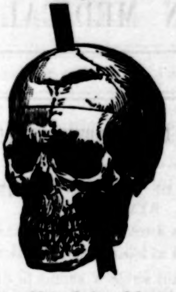
Under 5 years of age, 44—between 5 and 20 years, 8—between 20 and 40 years, 29—between 40 and 60 years, 15—above 60 years, 23. Born in the United States, 80—Ireland, 25—other places, 14.

Fig. 1.



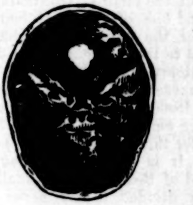
View of the tamping iron, and front view of the cranium, showing their *comparative* size. Iron 3 ft. 7 in. long; 1¼ in. in greatest diameter; weight 13¼ pounds.

Fig. 2.



Front and lateral view of the cranium, representing the direction in which the iron traversed its cavity; the present appearance of the line of fracture, and also the large anterior fragment of the frontal bone, which was entirely detached, replaced, and partially re-united.

Fig. 3.



View of the base of the skull from within; the orifice caused by the passage of the iron having been partially closed by the deposit of bone.

Vide “ Bibliographical Notice ” in Boston Med. and Surg. Journal, No. 7, vol. iii. New Series, March 18, 1869.